

Appl. No. : 10/574,127
Filed : March 31, 2006

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for drying soil in preparation for analysis ~~including~~ comprising the steps of:

- (a) increasing the surface area of the soil;
- (b) forcing a substantially inert gas through the soil; and
- (c) subjecting the soil to an elevated temperature that does not exceed approximately 50°C.

2. (Original) The method of claim 1 wherein the sample is prepared for analysis after approximately 1 hour of processing via steps (a) to (c).

3. (Original) The method of claim 1 wherein the sample is prepared for analysis after approximately 20 minutes of processing via steps (a) to (c).

4. (Currently Amended) The method ~~as claimed in any of the above claims~~ of claim 1 wherein the moisture content after steps (a) to (c) is less than approximately 9% wt.

5. (Currently Amended) The method of claim 1 wherein said increasing the surface area of the soil ~~as claimed in any of the above claims wherein the increase in surface area during step (a) is completed by~~ comprises breaking the soil down into smaller particles by mechanical motion.

6. (Currently Amended) The method of claim 1 wherein said increasing the surface area of the soil results in a ~~as claimed in any of the above claims wherein the mean particle size after step (a) is~~ of substantially less than 10mm.

7. (Currently Amended) The method ~~as claimed in any of the above claims~~ of claim 1 wherein the said substantially inert gas of step (b) is air.

8. (Currently Amended) The method ~~as claimed in any of the above claims~~ of claim 1 wherein said substantially inert gas of step (b) is free of moisture ~~free~~.

9. (Currently Amended) The method ~~as claimed in any of the above claims~~ of claim 1 wherein said substantially inert gas of step (b) is conditioned via dehumidification.

10. (Currently Amended) The method ~~as claimed in any of the above claims~~ of claim 1 wherein ~~the~~ said substantially inert gas of step (b) is conditioned by use of a desiccating agent to remove moisture from the gas.

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11. (Currently Amended) The method ~~as claimed in any of the above claims~~ of claim 1 wherein the substantially inert gas of step (b) is forced across the soil particles produced from step (a).

12. (Currently Amended) The method ~~as claimed in~~ of claim 11 ~~wherein said forcing a substantially inert gas through the soil comprises the use of fan forced substantially inert gas~~ the inert gas is fan forced.

13. (Currently Amended) The method of claim 11 ~~or claim 12~~ wherein the flow of the forced substantially inert gas flow is less than 4 m/s.

14. (Currently Amended) The method of claim 11 ~~as claimed in any of claims 11 to 13~~ wherein the flow of the forced substantially inert gas flow is approximately 2 m/s.

15. (Currently Amended) The method of claim 1 ~~as claimed in any of the above claims~~ wherein the elevated temperature during step (c) ~~to which the soil is elevated~~ is high enough to allow sample drying without impacting on the chemical and/or physical properties to be measured.

16. (Currently Amended) The method of claim 1 ~~as claimed in any of the above claims~~ wherein the elevated temperature during step (c) ranges from approximately 20°C to 50°C.

17. (Currently Amended) The method of claim 1 ~~as claimed in any of the above claims~~ wherein the elevated temperature during step (c) ranges from approximately 30°C to 40°C.

18. (Currently Amended) The method of claim 1 ~~as claimed in any of the above claims~~ wherein the elevated temperature during step (c) is approximately 35°C.

19. (Currently Amended) The method of claim 1 ~~as claimed in any of the above claims~~ wherein step (c) comprises the use of drying equipment that is preheated ~~the drying equipment is preheated before step (c)~~.

20. (Currently Amended) The method of claim 1 ~~as claimed in any of the above claims~~ wherein the method includes a further step (d) of ~~further comprising~~:

(d) moving the soil.

21. (Currently Amended) The method ~~as claimed in~~ of claim 20 wherein the particles remain moving for substantially all of the drying time.

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22. (Currently Amended) An assembly for drying of soil comprising:
(a) an inert gas supply device which is capable of forcing inert gas through a soil sample; and
(b) a heating element which is capable of subjecting the soil to an elevated temperature of less than approximately 50°C.
23. (Currently Amended) The assembly ~~as claimed in~~of claim 22 wherein the assembly further includes a soil crusher device which is capable of increasing the surface area of the soil.
24. (Currently Amended) The assembly ~~as claimed in~~of claim 22 ~~or claim 23~~ where the assembly further includes a device capable of keeping the soil in motion.
25. (Cancelled)
26. (Cancelled)
27. (New) The assembly of claim 23 further comprising a device capable of keeping the soil in motion.
28. (New) The method of claim 12 wherein flow of the forced substantially inert gas is approximately 2 m/s.
29. (New) The method of claim 13 wherein the flow of the forced substantially inert gas is approximately 2 m/s.
30. (New) The method of claim 12 wherein the flow of the forced substantially inert gas is less than 4 m/s.